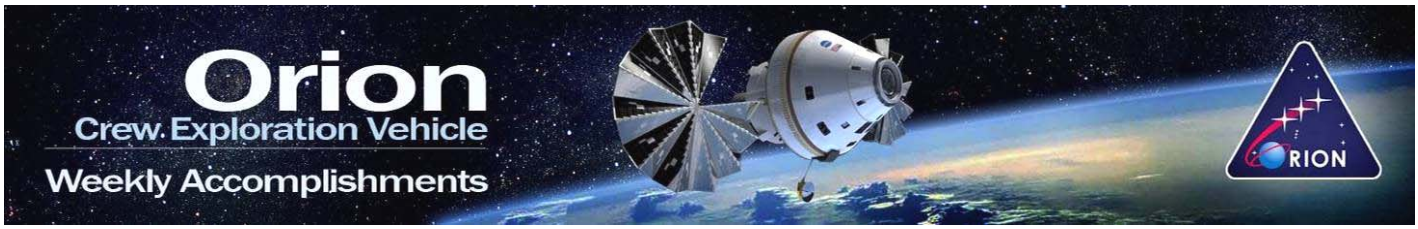


Week ending November 8, 2008

Countdown to Pad Abort-1 - 158 days

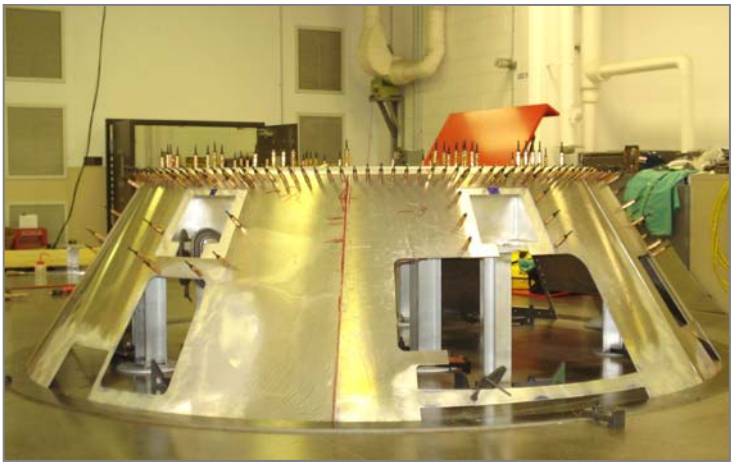
All hardware for the Launch Abort System (LAS) Abort Motor ST-1 test is in-house at ATK-Utah and all systems completed preliminary checkout for the November 20 test. The Test Readiness Review was completed successfully and all remaining work identified and validated by the test team.

PA-1 Crew Module (CM) Mass Properties Testing is complete with the conclusion of the moments of inertial testing. The CM was transported back to the shuttle hangar.

Three Electrical Ground Support Equipment assemblies were shipped from Lockheed Martin to Dryden Flight Research Center - the pyro test set, the continuity and isolation test set, and the battery simulation unit. These assemblies will be installed into the special test equipment rack after the article in-the-loop simulator arrives.

Work on the AA-1 crew module boilerplate heat shield "spider" assembly began with coordination of laser tracker support and liquid shimming. Installation of heat shield "spider" assembly began November 12. The AA-1 Heat Shield is shown at right.

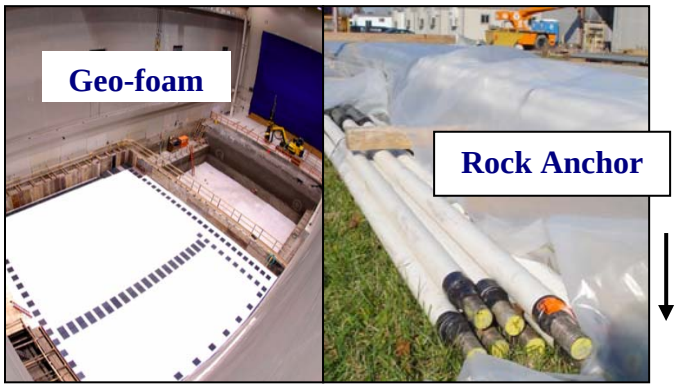
Pathfinder Forward Bay Cover inside mold line skins (Photo bottom right) have been fitted and are in the process of being match drilled when the outer mold line skin installation (Photo bottom left) is complete.



The Androgynous Peripheral Docking Assembly drill template was delivered to Johnson Space Center for use by the ATLAS team. It will be used to machine the hole pattern between the APDA and ATLAS tunnel.

The full charge/discharge cycling of the Orion battery at 30 deg C to obtain performance data in support of the Orion battery modeling efforts is complete. A matrix of 2 charge rates and 3 discharge rates were run to map voltage as a function of capacity at each rate. Impedance scans are currently being conducted at this temperature to determine cell resistance. Following completion, the same tests will be repeated at various other temperature ranges.

Glenn Research Center (GRC) Service Module (SM) has tested candidate Thermal Protection System (TPS) materials, SLA-220 and AETB-8, at room temperature in order to validate and correct the antenna design models. The development of the High Temperature Test Stand will allow the GRC SM team to further test the TPS materials and determine the affects of heating on the material and its impacts to the communications system.



Integrated Environmental Test Facilities (SPF): The geo-foam installation between the Reverberant Acoustic Test Facility (RATF) foundation vibration bearing pads (Photo bottom left) was initiated. Geo-foam installation in the RATF foundation near completion; Modal Vibration Facility rock anchor initial delivery – each anchor is typically 50 feet long and 700 pounds.

The 85-AA Hot Plume CFD Validation Test was completed at Glenn Research Center using the Nozzle Acoustic Test Rig. With the successful completion of the test, PIV (Particle Image Velocimetry) data for flow field velocity and surface pressure measurements were acquired for several nozzles with and without the capsule. The data including plume shape, spreading details, and interaction with the LAV (Launch Abort Vehicle) were provided to the CAP (CEV Aerosciences Project) team to validate turbulence modeling to help improve the computational accuracy of CEV/LAV Abort Motor plume simulations. Test crew and test hardware installation (Photos top and left). Particle Image Velcocimetry Rig shown in photo bottom right.